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Amendment to the Claims:

1. (Currently Amended) A method for use of a computer-assisted surgery system during a medical procedure, comprising:

receiving information on an object of interest;

tracking a position of a tool of a haptic device;

5 determining a scalar distance between a current position of said tool and said object of interest; and

providing an indication of said scalar distance to a user of said tool,

wherein the object of interest includes at least one haptic object defined by at least one of:

10 a mapping between a pose of the tool and an output wrench of the haptic device, and,

a mapping between a wrench applied by the user to the haptic device and an output position of the haptic device.

2. (Currently Amended) A method for use of a computer-assisted surgery system during a surgical procedure, the method comprising:

receiving information on an anatomical target region of a patient on which the surgical procedure is to be performed to remove tissue;

5 tracking a position of a surgical tool of a haptic device as the surgical tool is moved by a surgeon in performing the surgical procedure;

determining a distance between a current position of said surgical tool and the anatomical target region; and

10 providing to the user of the surgical tool an indication of said distance,

wherein the anatomical target region is associated with at least one haptic object defined by at least one of:

a mapping between a pose of the surgical tool and an output wrench of the haptic device, and

15 a mapping between a wrench applied by the user to the haptic device and an output position of the haptic device,

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wherein pose connotes position, orientation, velocity,
and/or acceleration, and
wherein wrench connotes forces and/or torques.

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3. (Original) The method of claim 2, further comprising, prior to said providing step, selecting a type of visual indication to provide to said user.

4. (Previously Presented) The method of claim 2, wherein said indication is provided by a visual indicator selected from the group consisting of a level meter, a dial, a numerical display, and a graph.

5. (Previously Presented) The method of claim 2, wherein said providing step comprises providing a visual indication of said distance on a display device associated with a computer-assisted surgery system.

6. (Previously Presented) The method of claim 2, wherein said providing step comprises providing a visual indication of said distance on a display device disposed on the haptic device associated with said computer-assisted surgery system.

7. (Previously Presented) The method of claim 2, wherein said providing step comprises providing a visual indication of said distance on a display device disposed on the surgical tool in proximity to the anatomical target region of the patient.

8. (Previously Presented) The method of claim 3, further comprising selecting a color for said visual indication based at least in part on a scalar distance.

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9. (Previously Presented) The method of claim 3, further comprising, prior to said providing step, selecting said visual indication based at least in part on said distance.

10. (Previously Presented) The method of claim 1, wherein the haptic object includes a definition of a desired shape for an anatomy of a patient.

11. (Cancelled)

12. (Previously Presented) The method of claim 1, wherein said haptic object includes a definition of a curve, a point, a surface, a volume, and a set of desired positions.

13. (Previously Presented) The method of claim 2, wherein said providing step further includes providing a predetermined visual indication indicating that said distance is within an acceptable range.

14. (Previously Presented) The method of claim 2, wherein said providing step further includes providing a predetermined visual indication indicating that said distance is in an unacceptable range.

15. (Currently Amended) A method for use of a computer-assisted medical system during a medical procedure, comprising:

receiving information on an object of interest;

tracking a position of a tool of a haptic device;

5 determining a scalar distance between a current position of said tool and said object of interest; and

providing a tactile indication of said scalar distance to said user of said tool,

wherein the object of interest includes at least one haptic object
10 defined by at least one of:

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a mapping between a pose of the tool and an output wrench of the haptic device, and

a mapping between a wrench applied by the user to the haptic device and an ouput position of the haptic device.

16. (Original) The method of claim 1, wherein said providing step further comprises causing vibration of a device that is in contact with said user.

17. (Original) The method of claim 1, further comprising selecting a type of indication based at least in part on said scalar distance.

18. (Original) The method of claim 1, wherein said providing step comprises providing said indication indicating that said scalar distance is within an acceptable range.

19. (Original) The method of claim 1, wherein said providing step comprises providing said indication indicating that said scalar distance is in an unacceptable range.

20. (Cancelled)

21. (Currently Amended) A method for use of a computer-assisted surgery system during a medical procedure, comprising:

receiving information on an object of interest;

tracking a current position of a tool of a haptic device as the tool

5 moves;

determining a current scalar distance between the current position of said tool and said object of interest; and

providing an audio signal which changes as the scalar distance changes to provide audio indication of said current scalar distance to a user of said tool,

10 wherein said object of interest includes at least one haptic object defined by at least one of:

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a mapping between a pose of the tool and an output wrench of the haptic device, and

15 a mapping between a wrench applied by the user to the haptic device and an output position of the haptic device.

22. (Original) The method of claim 21, further comprising, prior to said providing step, selecting a type of audio indication to provide to said user.

23. (Original) The method of claim 21, wherein said providing step comprises providing said audio indication of said scalar distance via an audio device associated with a computer-assisted surgery system.

24. (Previously Presented) The method of claim 21, wherein said providing step comprises providing said audio indication of said scalar distance via an audio device disposed on the haptic device associated with a computer-assisted surgery system.

25. (Previously Presented) The method of claim 21, wherein the audio signal changes proportionately to changes in said current scalar distance.

26. (Original) The method of claim 21, further comprising, prior to said providing step, selecting said audio indication based at least in part on said scalar distance.

27. (Previously Presented) The method of claim 21, wherein said haptic object defines a desired shape for an anatomy of a patient.

28. (Cancelled)

29. (Cancelled)

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30. (Previously Presented) The method of claim 21, wherein said providing step further includes providing a predetermined audio indication indicating that said scalar distance is within an acceptable range.

31. (Previously Presented) The method of claim 21, wherein said providing step further includes providing a predetermined audio indication indicating that said scalar distance is in an unacceptable range.

32. (Currently Amended) A computer-assisted surgery system for use during a medical procedure, comprising:

application logic operatively associated with said computer-assisted surgery system and operable to:

5 receive information on an object of interest located in an internal anatomy of a patient on whom the procedure is performed;

track the position of a surgical tool of a haptic device as the surgical tool moves at least in part through the internal anatomy of the patient during the medical procedure;

10 determine a current scalar distance between a current position of said tool and said object of interest; and

provide an indication of said current scalar distance to a user of said surgical tool which indication changes during the medical procedure as the surgical tool moves through the internal anatomy of the patient,

15 wherein said object of interest includes at least one haptic object defined by at least one of:

a mapping between a pose of the surgical tool and an output wrench of the haptic device, and

20 a mapping between a wrench applied by the user to the haptic device and an output position of the haptic device.

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33. (Original) The system of claim 32, wherein said application logic is further operable to provide a visual indication of said scalar distance to said user of said tool.

34. (Original) The system of claim 33, wherein said application logic is further operable to select a type of visual indication to provide to said user.

35. (Original) The system of claim 33, wherein said visual indication is provided by a visual indicator selected from the group consisting of a level meter, a dial, a numerical display, and a graph.

36. (Original) The system of claim 33, wherein said application logic is further operable to provide said visual indication of said scalar distance on a display device associated with said computer-assisted surgery system.

37. (Previously Presented) The system of claim 33, wherein said application logic is further operable to provide said visual indication of said scalar distance on a display device disposed on the haptic device .

38. (Currently Amended) A computer assisted surgery system for use during a surgical procedure, comprising:

a surgical tool of a haptic device for performing the surgical procedure on an anatomy of a patient to remove tissue;

5 a tracking system which tracks movement of the surgical tool during the surgical procedure; and

application logic operatively associated with said computer-assisted surgery system and operable to:

10 receive information about an object of interest in the anatomy of the patient;

receive tool position information from the tracking system;

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determine a distance between a current position of said tool and said object of interest; and

15 provide indication of said distance on the display device disposed on the surgical tool;

wherein the object of interest includes at least one haptic object defined by at least one of:

20 a mapping between a pose of the surgical tool and an output wrench of the haptic device, and

a mapping between a wrench applied by the user to the haptic device and an output position of the haptic device.

39. (Original) The system of claim 34, wherein said application logic is further operable to select a color for said visual indication based at least in part on said scalar distance.

40. (Previously Presented) The system of claim 33, wherein said application logic is further operable to select a plurality of visual indications based at least in part on said scalar distance.

41. (Cancelled)

42. (Previously Presented) The system of claim 33, wherein said haptic object defines a portion of the anatomy of the patient which is to be removed by the surgical tool during the medical procedure.

43. (Previously Presented) The system of claim 33, wherein said haptic object includes at least one of a defined curve, point, surface, volume, and set of desired positions.

44. (Original) The system of claim 33, wherein said application logic is further operable to provide a predetermined visual indication indicating that said scalar distance is within an acceptable range.

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45. (Original) The system of claim 33, wherein said application logic is further operable to provide a predetermined visual indication indicating that said scalar distance is in an unacceptable range.

46. (Original) The system of claim 32, wherein said application logic is further operable to provide a tactile indication of said scalar distance to said user of said tool.

47. (Original) The system of claim 32, wherein said application logic is further operable to cause vibration of a device in contact with said user.

48. (Original) The system of claim 32, wherein said application logic is further operable to select a type of indication based at least in part on said scalar distance.

49. (Original) The system of claim 32, wherein said application logic is further operable to provide said indication indicating that said scalar distance is within an acceptable range.

50. (Original) The system of claim 32, wherein said application logic is further operable to provide said indication indicating that said scalar distance is in an unacceptable range.

51. (Cancelled)

52. (Currently Amended) A computer-assisted surgery system for use during a medical procedure, comprising:

application logic operatively associated with said computer-assisted surgery system and operable to:

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receive information on an object of interest;

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track position changes of a moveable medical tool of a haptic device;

10 determine a current scalar distance between a current position of said tool and said object of interest as the tool moves relative to the object during the medical procedure; and

provide an audio indication of said current scalar distance to said user of said tool,

wherein the object of interest includes at least one haptic object defined by at least one of:

15 a mapping between a pose of the medical tool and an output wrench of the haptic device, and

a mapping between a wrench applied by the user to the haptic device and an output position of the haptic device.

53. (Original) The system of claim 52, wherein said application logic is further operable to select a type of audio indication to provide to said user.

54. (Original) The system of claim 52, wherein said application logic is further operable to provide said audio indication of said scalar distance via an audio device associated with said computer-assisted surgery system.

55. (Previously Presented) The system of claim 52, wherein said application logic is further operable to provide said audio indication of said scalar distance via an audio device disposed on the haptic device associated with said computer-assisted surgery system.

56. (Original) The system of claim 52, wherein said application logic is further operable to provide said audio indication of said scalar distance via an audio device disposed on a surgical tool used in proximity to an anatomy of a patient.

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57. (Original) The system of claim 52, wherein said application logic is further operable to select said audio indication based at least in part on said scalar distance.

58. (Previously Presented) The system of claim 52, wherein the haptic object includes a definition of a desired shape for an anatomy of a patient.

59. (Cancelled)

60. (Cancelled)

61. (Original) The system of claim 52, wherein said application logic is further operable to provide a predetermined audio indication indicating that said scalar distance is within an acceptable range.

62. (Original) The system of claim 52, wherein said application logic is further operable to provide a predetermined audio indication indicating that said scalar distance is in an unacceptable range.

63. (Original) The system of claim 52, wherein said application logic comprises computer executable software code.

64. (Previously Presented) The system of claim 32, wherein the surgical tool removes bone material and the haptic object includes a definition of a surface of bone to be left after a bone material removal procedure.

65. (Cancelled)

66. (Currently Amended) A computer readable medium programmed with instructions which when executed by a programmable device cause the programmable device to execute the steps of:

receiving information on an object of interest;

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5 determining a current position of a surgical tool of a haptic device used
in performing a surgical procedure;

 determining a scalar distance between the current position of said
surgical tool and said object of interest; and

 providing a changing indication of said scalar distance to a user of said
10 surgical tool as the surgical tool removes tissue during the surgical procedure,
 wherein the object of interest includes at least one haptic object
defined by at least one of:

 a mapping between a pose of the tool and an output
wrench of the haptic device, and

15 a mapping between a wrench applied by the user to the
haptic device and an output position of the haptic device.

67. (Previously Presented) The computer readable medium of
claim 66, wherein said indication is a visual indication.

68. (Previously Presented) The computer readable medium of
claim 66, wherein said indication is an audio indication.

69. (Previously Presented) The computer readable medium of
claim 66, wherein said indication is a tactile indication.

70. (Previously Presented) The computer readable medium of
claim 66, further comprising instructions which when executed by said programmable
device cause the programmable device to execute the step of selecting a type of
indication based at least in part on said scalar distance.

71. (Previously Presented) The computer readable medium of
claim 66, further comprising instructions which when executed by said programmable
device cause the programmable device to execute the step of providing said indication
indicating that said scalar distance is within an acceptable range.

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72. (Previously Presented) The computer readable medium of claim 66, further comprising instructions which when executed by said programmable device cause the programmable device to execute the step of providing said indication indicating that said scalar distance is within an unacceptable range.

73. (Cancelled)